

MARKETING OF WILD RICE



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INTRODUCTION

"Wild, wild, wild!" responded a gourmet food wholesaler when asked to describe the current marketing practices of the wild rice industry. Historically, the industry has been characterized by turmoil beginning with the Indian wars over ricing rights in the 1700's, and continuing to the present time with wide fluctuations in production, quality, and prices. Because our affluent society has placed a high value on the distinctive flavor of wild rice, the small wild rice industry is growing rapidly, aided by modern agricultural and merchandising techniques. Formerly, the market for wild rice was centered in Minnesota, Wisconsin, and Manitoba. In recent years, however, the market has been expanded considerably. Several major food firms with extensive distribution channels have decided to market wild rice nationally. In addition, wild rice is now being used in several different food products, resulting in an even larger market.

Because the rice industry is still in its infancy, little research has been done to define its existing marketing practices. Only recently, with the Arthur D. Little and F. Robert Erdman studies, has there been any major attempt to examine the existing marketing practices and future market potential. The Little and Erdman studies cover all phases of the industry; this report will deal directly with marketing in the wild rice industry.

OBJECTIVES OF THE STUDY

The general objectives of this report are:

- 1) To set forth the characteristics of wild rice
- 2) To examine current marketing practices within the wild rice industry.

Specifically, the report will consider supply, price and demand within the industry.

THE PRODUCT

Characteristics of Wild Rice

The wild rice kernel is grayish-brown to black in color and is known and valued for its distinctive and desirable flavor. Because differences exist in the chemical composition of soil, lighter-colored kernels are also prevalent. These lighter-colored kernels can be cured and changed to the more common grayish-brown or black color. However, as yet no empirical data exists which validates the association of dark color and quality.

The quality of wild rice is usually determined by the size and uniformity of the grain. When harvesting wild rice, the yield must be graded according to size. It is within this area of grading that the rice industry needs to develop uniform standards. Currently, many processors use individual methods of grading. More sophisticated means of measurement are gradually being developed, (see Appendix 1) but a substantial price differential still exists due to the wide variation in grades.

An additional comment is noteworthy at this time. When wild rice is combined with another type of rice in a mix, a key factor is the thickness of the kernel. This thickness determines the boiling time, which necessarily must be the same as the other rice used in the mix.

Wild rice equals most common cereals in its nutritive value. It is easily digestible, rich in Vitamin B, high in protein content but low in fat content, and deficient in Vitamin A and certain

mineral elements.

Table 1 prepared in 1903 by Dr. C. F. Langworth gives comparative food values of wild rice and common cereals. Wild rice is richer in riboflavin than wheat, corn, oats, and rye; it is similar to wheat, corn, and rye in thiamin content.¹

TABLE 1
FOOD VALUE OF WILD RICE

	Water	Protein	Fat	Carbon	Ash	Fuel Value per lb. Cal.
Wild rice						
Whole grain	9.5	12.9	1.0	75.2	1.4	1,625
Ground	13.0	10.9	0.8	74.0	1.3	1,740
Parched whole grain*	11.2	14.6	0.7	72.3	1.2	1,620
Parched and ground	9.5	11.5	0.8	76.9	1.3	1,800
Rice, polished	12.3	8.0	0.3	79.0	0.4	1,630
Barley, pearled	11.5	8.5	1.1	77.8	1.1	1,650
Wheat, cracked	10.1	11.1	1.7	75.5	1.6	1,685
Oats, rolled	7.7	16.7	7.3	66.2	2.1	1,850
Corn meal, unbolted	11.6	8.4	4.7	74.0	1.3	1,730
Hominy	11.8	8.3	0.6	79.0	0.3	1,650
Kafir corn	16.8	6.6	3.8	70.6	2.2	1,595
Buckwheat flour	13.6	6.4	1.2	77.9	0.9	1,620

* The most commonly used form of wild rice.

Sources of Wild Rice

Although wild rice grows widely throughout the United States and southern Canada, it is grown as a commercial crop only in Minnesota, Wisconsin, and the Canadian province of Manitoba. A breakdown of the commercial crops shows Minnesota producing 60 percent of the crop, Manitoba producing 35 percent, and Wisconsin 5 percent.² Minnesota's leading position in wild rice production is primarily the result of extensive rice paddies throughout the northern half of the state.

Because of this early paddy development, Minnesota is expected to remain the dominant supplier of wild rice.

Until recently, all wild rice was harvested from natural stands. In the future, however, naturally harvested wild rice will constitute a smaller percentage of the total rice market. In 1969, approximately 40 percent of the total crop was produced from rice paddies. Estimates indicate that by 1975, less than 10 percent of the wild rice will come from natural stands.

Buying Rice at the Harvester and Processor Levels

Rice is bought at both the harvester and processor levels.

Rice harvested from natural stands is often purchased from harvesters at the lakeside. The prices paid for the green rice are determined by a consensus of the size of the crop to be harvested, the quality and uniformity of the rice, and the size of the inventories held over from previous years. Often the buyer acts only as an agent for a parent firm who employs several buyers on commission. It is not unusual for the buyer to supply the canoes the harvesters use to gather the crop.

Paddy rice has been sold in a similar manner, but contract buying has become popular when dealing with larger food firms. In contract pricing, the firm guarantees a price for a certain level of quality. If the rice is of a higher quality, a bonus is paid; if it is of a lower quality, a penalty is applied.

No longer do supply and demand alone determine pricing. Many pricing decisions are based on speculation as to the size and quality

of the crop, the competition, and the amount of rice still held in inventory. And if the estimates are wrong? High prices, initially charged in a year when an estimated poor crop developed into a bumper crop, result in inventories carried at a high price level. Thus, past years' errors, in addition to supply and demand, become the determining factor.

Harvesting and Processing Wild Rice

Because its kernels fall to the ground when ripe, wild rice is called a shattering grain. Consequently, wild rice harvesting requires special attention. Most of the natural wild rice stands are harvested in the traditional manner. Ricers move through the fields in canoes, knocking the rice into their boats with poles. The procedure is repeated every other day for approximately two weeks.

In rice paddies and some natural stands, new mechanical harvesters, such as the Furuseth Harvester, are being utilized. But, as before, to harvest the entire crop the process must be repeated six or seven times. However, these mechanical methods are far superior to the canoe method.

The methods involved in harvesting and processing wild rice contribute to its high price. In the future, however, improved harvesting and processing techniques and the use of non-shattering seed should produce higher yields and reduce the costs of harvesting and processing, thereby lowering the price of wild rice for the consumer and increasing the yield per acre for the producer. For example, in a total crop of 1,500 - 1,800 pounds of green rice per acre, canoe

harvesting methods on a natural wild rice stand will yield 60 - 100 pounds of green rice per acre. Mechanical harvesting methods on a natural stand of the same quantity will yield 100 - 450 pounds of green rice per acre. Given a non-shattering seed (a type of rice which ripens simultaneously), a mechanical harvester could be expected to yield 1,000 - 1,400 pounds of green rice per acre.³

The processing of wild rice results in a 35 - 80 percent loss of weight in the harvested crop, due to drying and the removal of the hulls, grit and chaff. There are several stages in the processing of wild rice, most accomplished with mechanical devices. These stages are:

- Separating - the immature seeds and debris are separated by passing the rice through the water vat.
- Curing - the grain is stored, and stirred occasionally to prevent overheating.
- Parching - the rice is heated, but not to a point where it would "pop".
- Hulling - the hulls are removed from the kernels.
- Winnowing - the hulls are removed with a form of action suction.
- Gravity separation - the grain is graded and sized.

A list of key processors is given in Appendix II.

MARKETING WILD RICE

This is an extremely critical period for the wild rice industry.

Production could increase as much as four times current levels within the next few years as the result of new agricultural techniques, including improvements in harvesting and processing and the adaptation of wild rice to commercial rice paddies. Increased production has already begun. Thus, the question of how to reach the present and yet untapped rice markets is becoming increasingly important.

Methods

Both new and traditional means of marketing wild rice exist in the industry. National campaigns to acquaint potential buyers with wild rice are replacing the traditional method of selling directly to a small select group of customers. Such campaigns are an effective means of familiarizing the public with the unique characteristics and availability of wild rice at the retail market.

Independent ricers, however, are accustomed to dealing primarily with only select customers. In the past, the need for complex marketing plans was nonexistent; the demand usually exceeded the supply. Now, however, with an increase in supply and demand, it is essential that rice merchandisers have a clear understanding of current marketing practices. Without a successful marketing plan, any progress made in the growing, harvesting, and processing of wild rice would be futile.

Segmentation of the Market

The present dollar value of U. S. wild rice is approximately \$7-10 million. This is equal to 900,000 pounds of processed wild rice.⁴ This market can be divided into three segments:

- 1) Bulk to restaurants and other institutional markets.
- 2) Packaged as whole wild rice to stores and private customers.
- 3) Packaged as rice mixes to retail stores.*

* 95 percent of rice mixes are marketed by large food companies.⁵

Current data indicate that 60 percent of all wild rice is sold in bulk form to restaurants and institutional markets, the remaining 40 percent is retailed through stores or private sales. Although no data are available as to the percentage of the total market currently held by the rice mixes, the concentrated promotional campaigns suggest the possibility that rice mixes constitute a major segment of the wild rice market.

Prior to the advent of rice mixes, 75 percent of wild rice sales were concentrated in Minnesota. Within the state, the Twin Cities were estimated to consume 50 percent of the total output of 900,000 pounds.⁶ While this strong regional demand still exists, the rice mixes should help to develop a larger and less concentrated market. Previously, only cities with populations of 100,000 or more were considered a significant market. Now, however, with the wide distributional systems of national food firms, stores in less populated cities are able to stock and display wild rice mixes.

Packaging

The type of container used to market wild rice must provide necessary protection from possible moisture. It must be easily stored and able to withstand normal abuse. For retail packages, the container serves as an important promotional media. The size, shape, and color used can have an important influence on the prospective buyer. Wild rice is available from most processors packaged as whole grain rice, cracked rice, and half whole grain and half cracked rice. It is marketed in three basic forms: bulk containers, small retail-sized packages, and cans.

Wild rice is usually stored in bulk form by the processor and packaged as orders are received. Most of the bulk rice is stored at the processor's site, although several large processors have storage facilities in New York. Bulk packages vary in size from 25 to 100 pounds. For bulk shipments, the package acts solely as a shipping container, and should facilitate good handling and easy storage. For example, one wholesaler ships bulk rice in plastic bags inside of a circular cardboard container. This method allows the bulk package to be resealed, a convenience in situations where a continuous source of rice is needed.

Small retail packages are available in 4, 8, 12, and 16-ounce sizes. The 6-ounce size is used most often for rice mixes, and the 4-ounce size most often for whole rice products. Both whole rice and rice mixes are shipped in cases containing either 12 or 24 individual packages.

Canned dry-packed whole grain rice is available in 6 and 12-ounce cans, while canned wet-packed rice is available in 14 and 16-ounce cans. In the latter, rice constitutes only 30 percent of the total weight; water makes up the remaining percentage.

The average processor ships about 15-20 percent of his output in bulk, and the remainder in packaged form. Several processors, however, ship as much as 90 percent of their product in bulk lots. Packaging may occur at any stage in the distribution system, depending on the needs of the consumer.

The sole source of advertising for all wild rice products is package advertising. Consequently, the total sales program must be presented on the package label. And because the label offers the only means of distinguishing one brand from another, it requires special attention. Several packages list recipes for the interested consumer and/or preparation procedures.

Brand loyalty results from repetitive purchases of a particular brand of wild rice or other items in the company's product line. Since most of the rice mixes are produced by major food firms, brand loyalty can play a dominant role in the selection of a particular wild rice product. With the introduction of national advertising of rice mixes, the package label is still a major element in the promotional campaign, but is no longer the sole source of information for the buyer.

Wholesaling

The distribution channels for wild rice differ slightly with each processor, but industry sources estimate that 80 percent of the

sales are handled by brokers, 10 percent are sold directly to stores, and 10 percent are sold directly to restaurants. Approximately 60 percent of total processor sales go to restaurants, and 40 percent to stores and special customers. The average processor does business with five brokers. These brokers are usually located in the largest American cities.⁷

There are two main types of wild rice brokers. The first type, institutional food brokers, serve mainly as middlemen for sales to restaurants and the institutional market. Usually, they do not provide any reseller support but act mainly as contact agent. The institutional food broker sells both bulk and packaged rice (usually packaged with the processor's label). The second type of broker is the specialty food broker, whose primary market is specialty food shops and other specialty food brokers. Depending on customer needs, rice is bought either in bulk or packaged form, and is also resold in both forms. Some of these brokers package rice for their customers.

Rice mixes are distributed through the normal grocery distribution system. Independent and chain food store wholesalers are contacted by sales representatives of the large food companies. These salesmen usually promote the company's entire product line and provide reseller support both to the wholesaler and the retailer.

Retailing

The largest percentage of wild rice retail sales occurs in grocery and specialty food shops. The remaining percentage usually consists of local sales or sales to repetitive, special customers.

Normally, these local and special customers purchase the rice at near wholesale prices.

Very little promotion of 100 percent wild rice products is carried on at the retail level. Fluctuating harvests have created shortages so that the restaurateur and consumer cannot depend on available shelf supply. As the quality and quantity falls, the consumer may be forced to accept the smaller packages or a wet-packed product, or may decide against the purchase of wild rice in any form. This gradually can result in a drop in sales volume, and eventually many retailers may refuse to stock the product.

Wild rice products are usually shelved with other spiced rice products at the retail outlets. If the grocery store has a special gourmet food section, then the 100 percent wild rice products are usually shelved there and the wild rice mixes are still shelved with the other spiced rices. In the future, as major food firms begin to offer 100 percent wild rice products, such firms will be able to offer two different rice products, one in the gourmet section and one in the spiced rice section.

This usual means of entering the rice mix market is through the use of a test market. As of this report, Green Giant and Uncle Ben's have established a market for their rice mixes. A number of other large food firms are test marketing at this time.⁸

Advertising and Promotion

Wild rice has characteristics easily adaptable to an advertising program with its distinctive flavor a strong selling point. In

addition, illustrations of its Indian background give wild rice a singular image that can be relayed to the consumer. If desired, the food values, including the low fat and high protein contents, can be stressed.

Prior to the introduction of wild rice mixes on a national scale, all advertising and promotional efforts consisted of local campaigns and package advertising. In the past, the total profit margin and the small volume of wild rice have not permitted funds for national or regional advertising. The usual broker arrangement does not provide either an effective or an efficient means of promoting wild rice. Complimentary local advertising by the Red Owl stores in Minnesota, offering wild rice at a special reduced price of \$3.96/pound, stimulated a large consumer demand for the product. Local advertising by several processors has been successful for some as a means of selling within their own immediate area.

Wild rice mixes have had the support of national campaigns in several leading home magazines. These selling programs have ranged from a four-color, full-page ad in Ladies Home Journal, to junior and one-quarter page sizes in Better Homes and Gardens. The cost of these promotions is a major investment. For example, a one-time, full-page, four-color ad in Better Homes and Gardens, which has a readership base of 7,500,000, costs approximately \$38,000. A regional campaign for the east-north central and west-north central region of the United States, with a readership base of approximately 2,300,000 would cost approximately \$22,000 for a one-time, full-page, four-color ad and approximately \$12,500 for a one-time, four-color, one-half page ad. Because

quantity discounts are available, a series of ads run in the same magazine would be less expensive per advertisement.⁹

There also appears to be some promotion of wild rice on the wholesale level in some grocery wholesaling magazines.

Special promotional displays have been utilized in grocery stores to further promote wild rice mixes. In addition, special coupons and cash refunds to the buyer have been employed.

In several instances, wild rice has been publicized in news stories, these stories usually concentrating on the traditional methods of harvesting wild rice and its relationship to the Indians. For example, several articles dealing with the emerging wild rice industry have recently appeared in the Milwaukee Journal. One issue included several recipes using wild rice.¹⁰ While articles such as these do not promote any one particular brand of wild rice, the image is nonetheless promoted at no expense to the rice industry.

The Rice Council of America is also providing indirect advertising for the wild rice industry with a \$400,000 campaign to emphasize the variety available in rice products. Theme of the campaign is VA-RICE-TY. It began in Life magazine in October of 1969, and will run for one year.¹¹ While it is not specifically mentioned in the campaign, wild rice and wild rice mixes can be considered varieties of rice.

With the exception of several food shows sponsored by the Minnesota Department of Agriculture, no state agencies or trade associations currently promote wild rice in the United States or Canada.

Competition

The wild rice industry's major competition is with other gourmet food products and low-price substitutes for wild rice. Wild rice is primarily a gourmet food, and is used principally as a side dish or as a stuffing for wild game. The state of Minnesota has traditionally dominated this market. With the exception of the Northland brand in Winnipeg, Canada, the retail trade has been dominated by brands such as Mountie, Totem Pole, Chippewa, MacGregor, Bowstring, Arrowhead, Hicks, Mille Lacs, and Canoe. In addition to the current all rice products and rice mixes, Green Giant is market testing frozen wild rice casseroles in Buffalo, New York, and St. Louis.

Complimentary lines of rice include a pancake mix, a muffin mix, buckwheat wild rice mix, breakfast cereal, wild rice dressing, instant wild rice, and wild rice soup. At present these new markets are quite small, and the majority of the above mentioned products can be marketed through channels similar to the wild rice mixes.

TABLE 2
SUBSTITUTES FOR WILD RICE

<u>Item</u>	<u>Price Per Serving (1968)</u>
Wild Rice	0.55
Long Grain and Wild Rice Mix	0.22
Precooked Long Grain White	0.04
Brown Rice	0.02
Chicken Flavored	0.06
White Rice	0.01

Source: Arthur D. Little, Inc.

Exports and Export Duties

An export duty of 5 percent is imposed on wild rice exported from Manitoba. Distributors and processors from the United States buy about 70 percent of the Canadian wild rice crop. (See Appendix III.)

THE SUPPLY, PRICE, AND DEMAND OF WILD RICE

Time Series and Cross-Sectional Supply Data¹²

The average supply of wild rice available for marketing in North America has been 3 million pounds of green rice, or about 1 million pounds of processed rice, of which approximately 900,000 pounds reaches the United States. About 60 percent is produced in Minnesota, 35 percent in Manitoba, and 5 percent in Wisconsin. Tables 3 and 4 show the total output of wild rice for Minnesota and Manitoba during the past few years.

Time Series and Cross-Sectional Price Data¹³

Harvester Prices: Green rice prices paid at lakeside or processing sites in Minnesota are shown in Table 5. Minnesota data were derived from low bulk prices of processors when specific green rice prices were not available.

Buyer Prices: Table 5 presents the data on buyer prices. Currently, the commission paid is a standard \$.10/pound. The dates of 1944 and 1955 were arbitrarily chosen to reflect previous changes in the commission rate.

Processor Prices: The processor prices presented in Table 5, represent low bulk prices for Minnesota. The significant difference between buyer and processor prices results mainly from moisture and other processing loss.

Wholesaler Prices: Wholesaler prices for Minnesota are presented in Table 5. They were derived from processor prices by adding an average 25 percent to represent transportation, insurance, commission,

TABLE 3

HARVESTER AND DEALER LICENSES AND SUPPLY
OF GREEN RICE IN MINNESOTA, 1939 TO 1967

Year	Harvester Licenses		Boat Tags \$5.00		Dealer Licenses		Number Pounds Wild Rice Harvested
	No. Sold	Amount (\$)	No. Sold	Amount (\$)	No. Sold	Amount (\$)	
1939	2,514	1,257			55	275	
1940	2,389	1,195			52	260	1,586,000
1941	652	326			25	125	20,000
1942	1,071	535					337,000
1943	292	146					34,000
1944	734	367					400,000
1945	1,461	1,461					240,000
1946	2,222	2,222					400,000
1947	1,666	1,666	807	4,035		2,750	540,175
1948	1,834	1,834	893	4,465		2,650	1,038,355
1949	888	888	338	2,690		2,550	683,508
1950	1,383	1,383	792	3,960		3,150	552,775
1951	2,299	2,299				3,175	532,308
1952	2,274	2,274			114	2,725	445,875
1953	2,384	2,381				2,395	1,340,297
1954	4,487	4,485			182	4,715	3,109,858
1955	4,996	4,693			211	5,175	1,235,103
1956	6,842	6,456			274	6,880	3,941,663
1957	7,500	5,752			218	7,350	1,036,749
1958	9,702	9,198			333	8,315	3,224,100
1959	9,322	26,439			256	11,975	2,067,018
1960	10,486	29,671			285	11,150	2,300,685
1961	14,183	39,890			284	11,620	2,771,585
1962	9,832	27,849			210	8,135	1,324,346
1963	11,874	33,403			259	11,030	3,215,674
1964	9,192	25,742			241	9,850	1,285,082
1965	9,855	27,472			251	7,950	1,086,710
1966	8,947	24,959			200	6,215	924,000
1967	15,750				362		2,628,700

Source: Department of Conservation, State of Minnesota.

(Reprinted from The Feasibility of Paddy Production of Wild Rice in Manitoba, Arthur D. Little, Inc., p. 48).

TABLE 4
SUPPLY OF GREEN RICE IN MANITOBA, 1949 TO 1967
(lbs.)

Year	Crown Land	Whiteshell Area	Total
1949	91,792	243,000	334,792
1950	56,775	75,361	132,136
1951	41,119	177,156	218,275
1952	84,712	197,461	112,749
1953	6,600	22,661	29,261
1954	42,728	6,113	48,841
1955	58,950	1,659	60,609
1956	426,734	61,619	488,353
1957	33,611	54,994	88,605
1958	125,675	141,578	267,253
1959	2,792	2,208	5,000
1960	202,964	64,677	267,641
1961	204,608	120,392	325,000
1962	102,201	2,799	105,000
1963	100,319	40,247	140,566
1964	166,907	66,490	233,397
1965	20,000	3,662	23,662
1966	113,932	5,194	119,126
1967	700,000	200,000	900,000

Average for 18 years approximately
160,000 pounds green rice per year.

Note: Figures shown above do not include wild rice taken from lakes in Indian Reserves or taken from Crown land lakes and unreported.

Source: Manitoba Department of Mines and Natural Resources
News Service, 20 Oct. 1967. Manitoba Government, Public
Information Branch, Winnipeg.

(Reprinted from The Feasibility of Paddy Production of Wild Rice in Manitoba, Arthur D. Little, Inc., p. 49).

and other broker costs.

Retailer Prices: Retail prices in Table 5 represent prices in large city markets. Where data was not available, retail price was derived by adding 75 percent of the wholesale price, a margin of 42.9 percent.

Price Fluctuation: Wild rice price changes are inversely related to output changes in a high production-low price and low production-high price pattern. Price changes are most significant from year to year and within the ricing season at harvester level. Processors carry an inventory of processed rice from year to year and are able to smooth price changes somewhat at the processor level. But, more than one bad year may cause processor prices to fluctuate upward. Wholesale and retail prices usually reflect any change in price at the processor level and any increases (but not necessarily decreases) in marketing costs.

Present Demand¹⁴

The demand curve for wild rice at the producer and retail levels is presented in Figure A on a logarithmic scale for the years 1953-1964. The curves are elastic, which is appropriate for a specialty food with a wide variety of substitutes and a large number of uses. A larger supply could probably be marketed without a dramatic decrease in price and with an increase in total revenues for each market level. A decrease in supply would increase price, but would decrease total revenue for each market level.

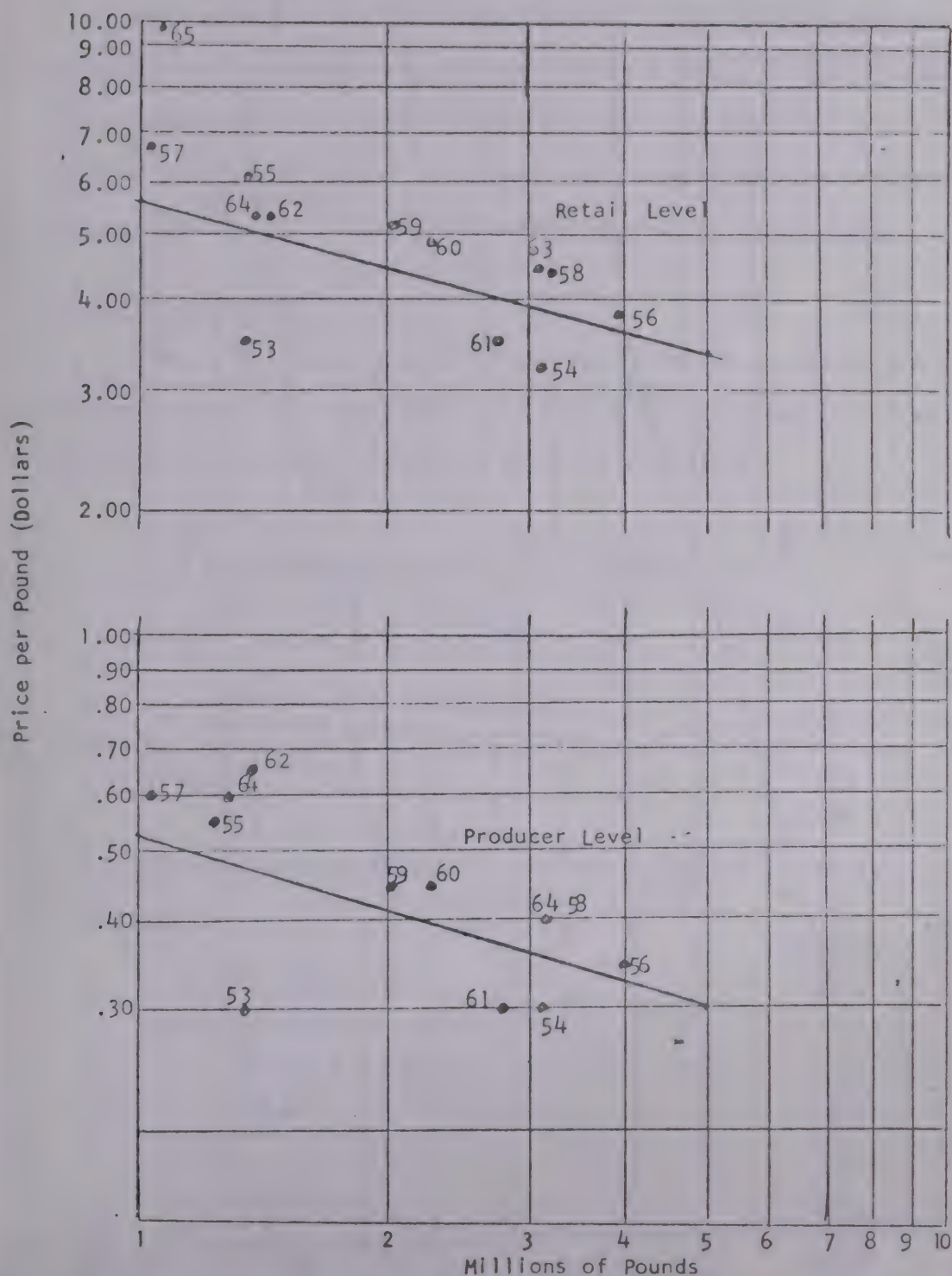
TABLE 5

TIME-SERIES WILD RICE PRICES AT VARIOUS MARKETING LEVELS
IN MINNESOTA, 1940-1968

Fall Harvester	Harvester	Buyer	Processor	Wholesaler (processor price plus 25%)	Retailer (42.9% margin)
1940	\$0.10	\$0.12	\$0.48-0.52	\$0.62	\$ 1.08
1941	0.10	0.12	0.50	0.62	1.08
1942	0.10	0.12	0.50	0.62	1.08
1943	0.20	0.22	1.00	1.25	2.19
1944	0.35	0.40	1.75	2.19	3.83
1945	0.35	0.40	1.80	2.25	3.94
1946	0.25	0.30	1.25	1.57	2.75
1947	0.20	0.40	0.85-1.00	1.19	2.08
1948	0.20	0.40	0.85-0.90	1.12	1.96
1949	0.20	0.25	1.10	1.38	2.30
1950	0.30	0.35	1.50	1.86	3.25
1951	0.40	0.45	2.00	2.50	4.38
1952	0.30	0.35	1.60	2.00	3.50
1953	0.30	0.35	1.65	2.06	3.50
1954	0.30	0.35	1.50	1.86	3.25
1955	0.55	0.65	2.75	3.44	6.02
1956	0.35	0.45	1.75	2.19	3.83
1957	0.60	0.70	2.95	3.69	6.46
1958	0.40	0.50	2.00	2.50	4.38
1959	0.45	0.55	2.20-2.40	2.90	5.08
1960	0.45	0.55	2.20	2.75	4.81
1961	0.30	0.40	1.60	2.00	3.50
1962	0.65	0.75	2.50	3.02	5.25
1963	0.40	0.50	2.00	2.50	4.38
1964	0.60	0.70	2.40	3.00	5.25
1965	0.90	1.00	4.50	5.62	9.83
1966	1.50	1.60	6.00	7.50	12.00-15.00
1967	1.10	1.20	4.50	5.62	8.76-9.83
1968	0.50-1.00 (65¢ aver)	0.75	2.50-3.00	3.50-4.00	5.50-6.00

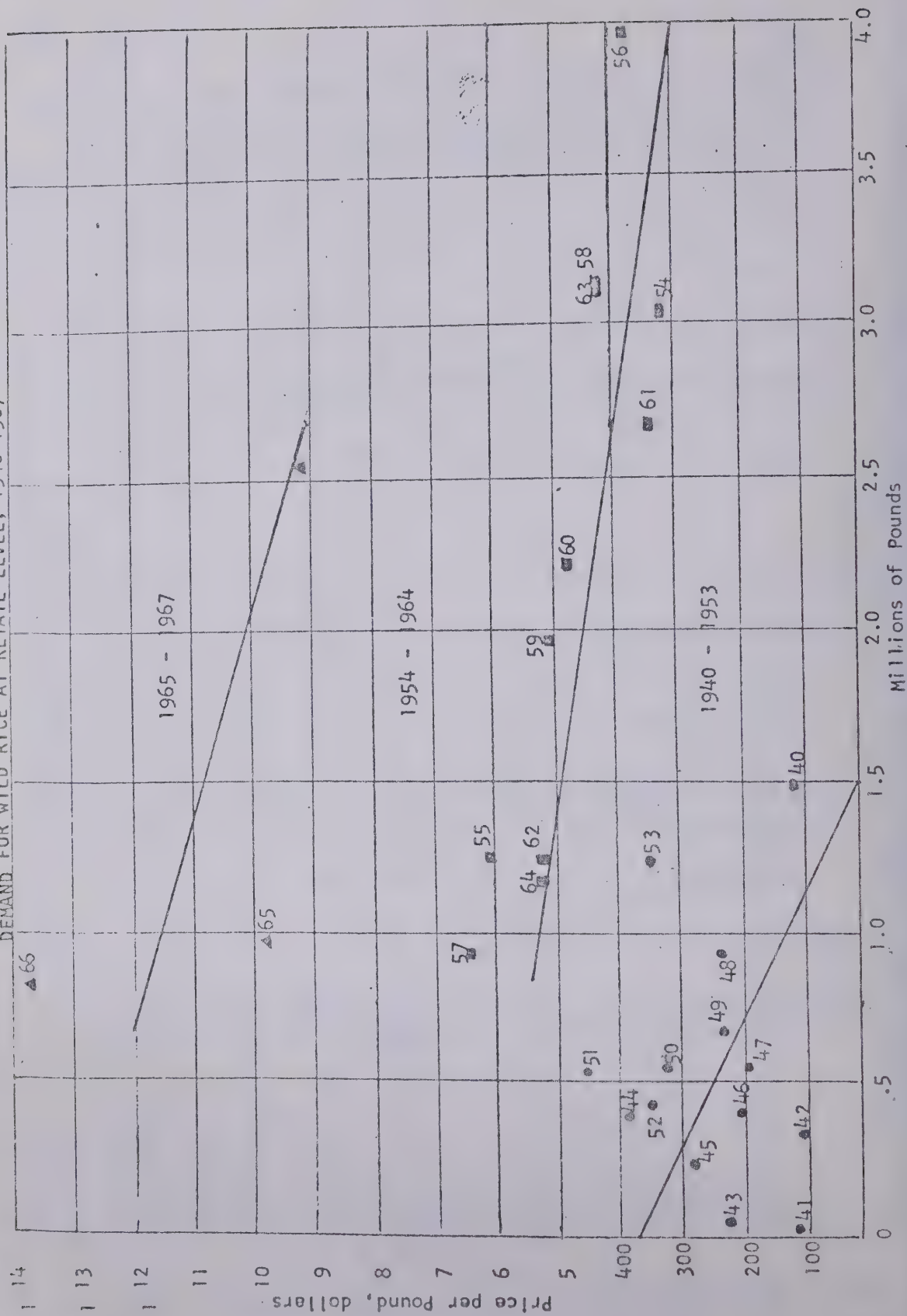
Source: The Feasibility of Paddy Production of Wild Rice in Manitoba, Arthur D. Little, Inc. p. 51.
(1968 Data Obtained From A Study of Wild Rice in Minnesota, F. Robert Erdman, p. 107.)

FIGURE A
DEMAND FOR WILD RICE AT PRODUCER AND RETAIL LEVEL, 1953 TO 1964



Source: The Feasibility of Paddy Production of Wild Rice in Manitoba
Arthur D. Little, Inc., p. 54.

FIGURE B
DEMAND FOR WILD RICE AT RETAIL LEVEL, 1940-1967



The demand for wild rice has increased significantly during the years 1940 to 1967 (Figure B). Three different levels of demand appear, one for 1940-1952, one for 1953-1964, and one for 1965-1967. After each shift upward in demand, more wild rice could be sold at the same price or the same supply of rice could be sold at a higher price.

The Marketing Margin

The marketing margin for wild rice is similar to the margin for processed fruits and vegetables. The margin for processed fruits and vegetables as a percent of selling price is as follows:

Marketing Margin

Retailing expense	21%	=	
Wholesaling transportation and other distribution expense	14%	=	79%
Processing expense	44%	=	
Producer's share			<u>21%</u>
			100%

The 79 percent marketing margin can also be attributed to the following categories:

	<u>Percent</u>
Labor and fringes	23.8
Containers and supplies	13.8
Buildings and equipment	5.3
Advertising and promotion	6.5
Other transportation	3.9
Other expenses	22.3
Profit before tax	<u>3.3</u>
	78.9

Figure C shows the steps in the marketing of wild rice that contribute to the marketing margin. The marketing margin for wild rice appears to range from 70 to 90 percent. This marketing margin can be reduced through:

- 1) better harvesting methods
- 2) improved processing equipment
- 3) better marketing techniques
- 4) stabilization of the supply of wild rice
- 5) improved competition.

FIGURE C

**STEPS IN THE MARKETING OF WILD RICE
THAT CONTRIBUTE TO THE MARKETING MARGIN**

	Cumulative Price per Pound	
Harvester/Producer	~~\$0.65~~	
Buyer	~~\$0.75~~	Buyer adds \$0.10 per pound as buying commission.
Processor	~~\$3.15~~	Yield of processed rice is 33 percent of green rice. Estimate \$0.30 per pound processing costs and a 12-15 percent margin.
Wholesaler	~~\$3.94~~	Broker adds 25 percent of processor price for commission, transportation, insurance, communication, etc. "
Retailer	~~\$5.62~~	Retailer adds 43 percent margin for all overheads and net return. Sales in 4-8-ounce packages in grocer outlets.
Consumer		Restaurant prices to consumers would be higher by factor of labor and other restaurant costs.

The Future Supply of Wild Rice

The future supply of wild rice will be increased by developing a new non-shattering seed and by using increased paddy production. The average yearly crop of 3 million pounds of green rice can be doubled with an additional 7,500 acres of rice paddies. If the development of rice paddies continues at the present rate, the acreage in Minnesota will increase from 3,000 acres in 1969 to 8,000 acres in 1970. This alone would double the ¹⁹⁶⁷ wild rice output.

As of this report, the market potential of wild rice is good. Present demand analysis suggests that the market could absorb more than 6 million pounds of green rice at a retail price of \$2 per pound. It is difficult to predict the point at which it will no longer be profitable to produce wild rice, but it has been indicated that 8-9 million pounds of processed rice could possibly be sold at a price of \$1 to \$1.25 per pound.¹⁵ The results of large-scale advertising may result in sizable quantities of wild rice being sold.

The Future Demand for Wild Rice

As exhibited in Figure B, the demand for wild rice has shifted upward over time. Our affluent society, recognizing its distinctive flavor, will continue to demand increasing amounts of wild rice.

Other factors that influence the demand are:

- 1) the increasing real per capita disposable income
- 2) the growing population
- 3) the increased preference for all rice products
- 4) the expanding non-household food consumption

5) the sales promotions and advertising campaigns.¹⁶

The Future Prices of Wild Rice

Previously, the price of wild rice has varied from year to year depending on the current supply. Increased production and wide-spread demand for wild rice will probably cause slightly lower prices in the next few years. It will not be until production and processing costs are substantially lower that a general price level for wild rice can accurately be determined. As previously mentioned, however, retail prices of \$1 to \$1.25 per pound are possible in the distant future, although, because the rate of increased production is slow, the probable price of green rice will be approximately \$.50 per pound.¹⁷

CONCLUSIONS

Present Methods of Merchandising

The wild rice industry is currently at a critical stage in its development, as new methods of harvesting and processing are being used. The increased production has resulted in the need for better marketing techniques. To thoroughly comprehend the present marketing practices, an understanding of the harvesting and processing stages is necessary. Improvements in these two stages will determine the rate of expansion of the industry and consequently the speed with which marketing practices change. The existing practices involving speculation at the harvester and processor level have added to the confusion. Improved marketing practices should begin at this level.

The market can be segmented into three main levels: bulk to institutional markets, 100 percent wild rice products to retail stores, and rice mixes to retail stores. The recent entry of major food firms into the rice mix market has resulted in the need for more competitive and sophisticated market plans. Advertising and promotion is no longer limited to the package label, as extensive advertising campaigns have been used in promoting rice mixes. Because of the concentrated effort to sell wild rice mixes, rice mixes may become a major component of the wild rice market. Should this occur, the wholesaling and retailing methods will eventually shift from the existing broker arrangement to a grocer wholesaling and retailing arrangement. As competition becomes more keen, the need for product improvement and differentiation will become more apparent.

The Supply, Price, and Demand of Wild Rice

The supply of wild rice has fluctuated widely in the past. Production yielded approximately 3 million pounds of green rice or about 1 million pounds of finished rice per year on an average. The majority of the wild rice has been grown in Minnesota, 65 percent, and Manitoba, 30 percent. The total supply of wild rice is expected to double in the next few years due to the rapid expansion of rice paddies.

The price of rice has historically been inversely related to the size and quality of the crop. The marketing margin of wild rice is approximately 80 percent with the remaining 20 percent going to the producer. The retail markup is approximately 43 percent of the wholesale price.

The demand for wild rice has definitely increased over the past few years despite abnormally high prices. This increase in demand is the result of increasing incomes, a more affluent society, growth of non-household food expenditures, increased preference for rice products, and new promotional efforts. Present analysis indicates that there is sufficient demand to warrant the absorption of 6 million pounds of green rice at approximately \$2 per pound. Other estimates indicate that 8 to 9 million pounds of processed rice could be marketed at a price of \$1 to \$1.25 per pound.

APPENDIX I

STANDARD METHOD OF GRADING

Minnesota Wild Rice Harvesters Association
Deerwood, Minnesota

	Whole Grain	Shorter	Broken	Broken Shortest Grain	
<u>Width</u> <u>Length</u>	$\frac{1}{1}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	Extra width
<u>Width</u> <u>Length</u>	$\frac{2}{1}$	$\frac{2}{2}$	$\frac{2}{3}$	$\frac{2}{4}$	Large width
<u>Width</u> <u>Length</u>	$\frac{3}{1}$	$\frac{3}{2}$	$\frac{3}{3}$	$\frac{3}{4}$	Medium width
<u>Width</u> <u>Length</u>	$\frac{4}{1}$	$\frac{4}{2}$	$\frac{4}{3}$	$\frac{4}{4}$	Small width

Numbers $\frac{2}{1}$ - $\frac{3}{1}$ are in greatest demand. The Uncle Ben's

Company and other large users demand this medium grade of whole grain rice. Price: \$3.00 to \$3.40 per pound.

Numbers $\frac{3}{4}$ - $\frac{4}{4}$ will be all immaturely harvested and of inferior quality, mostly used in mixes and blends.

All of the four number $\frac{1}{1}$ grades are of excellent quality and sell at prices 20 to 40¢ above medium grades to supply a limited demand.

Investments in inventories of low quality and grade have an effect on prices of the better grades and qualities. Carry over inventory will usually consist largely of the lower grades and some of the top grade.

Source: Erdman, Wild Rice in Minnesota, p. 100.

APPENDIX II

WILD RICE PROCESSORS

MINNESOTA:

Fred Bartick
 - E. Julian Davis
 Burnell Ferguson
 Dean Hicks
 Ben Hoffman, Jr.
 Sherman A. Holbert
 Russell W. Lego
 Donald J. McGregor
 Robert J. McGregor
 F. I. Moore - Bowstring
 Wild Rice Co.
 Kenneth Morgan
 Harold Myers
 Clifton Nelson
 Daniel O'Connell
 E. E. Patson
 - Remy Seed Co.
 Peter Zak

Deer River
 Box 200, Aitkin
 Northome
 Cohasset
 Orr
 Isle
 Federal Dam
 Aitkin
 Aitkin

P.O. Box 407, Grand Rapids
 Route 1, Deerwood
 Remer
 Box 414, Grand Rapids
 Orr
 Menahga
 Box 1356, Mankato
 Hillman

WISCONSIN:

- Indianhead Company
 Ned Fennell
 Jim Taylor
 Bad River Indian Reservation
 John Radke
 Wilson Drug

Spooner
 Hayward
 Hayward
 Odanah
 Siren
 Hayward

CANADA:

Manitoba:

- W. A. Williams
 - Holden Wild Rice
 - Northland
 - Indian Wild Rice Products
 (Processed at Northland)

Winnipeg
 Winnipeg
 Winnipeg
 Pine Falls

Nova Scotia:

Percy Horsley (not documented)

Canso

Ontario:

Shoal Lake Fisheries
 Norbert Michald
 Paul Ritchenesse

Keewatin
 Lindsey
 Dinorucc

Source: Erdman, Wild Rice in Minnesota, p. 105.

CANADIAN EXPORTS OF WILD RICE
(1963-1968)

Country	1963		1964		1965		1966		1967		1968	
	Quantities (lb)	Values (\$)	Quantities (lb)	Values (\$)	Quantities (lb)	Values (\$)	Quantities (lb)	Values (\$)	Quantities (lb)	Values (\$)	Quantities (lb)	Values (\$)
Britain	--	--	936	1,800	--	--	--	--	--	--	--	--
France	240	582	590	1,548	--	--	240	1,000	1,079	6,000		
Malaya	184	213	--	--	--	--	--	--	--	--		
Jamaica	45	135	--	--	225	700	--	--	--	--		
United States	119,127	180,963	233,770	445,393	66,927	180,750	77,209	426,000	404,772	872,000	41,950*	135,000*
Total	119,596	181,893	235,296	448,741	67,152	181,450	77,472	427,000	405,868	878,000	41,950*	135,000*

* Through March 1968.

Source: Dominion Bureau of Statistics, External Trade Division, Exports by Commodities, Vol. 1963 through March 1968. (Reprinted from The Feasibility of Paddy Production of Wild Rice in Manitoba, Arthur D. Little, Inc. p. 50.)

FOOTNOTES

1. F. Robert Erdman, A Study of Wild Rice in Minnesota conducted for Minnesota Resources Commission in cooperation with Upper Great Lakes Regional Commission, July 1969, p. 7.
2. Arthur D. Little, Inc., The Feasibility of Paddy Production of Wild Rice in Manitoba, a report to Manitoba Department of Commerce and Industry, September 1968, p. 3.
3. Little, Wild Rice in Manitoba, p. 34.
4. Ibid., p. 55.
5. Erdman, Wild Rice in Minnesota, p. 106.
6. Ibid., p. 108.
7. Little, Wild Rice in Manitoba, pp. 44-45.
8. Erdman, Wild Rice in Minnesota, p. 110.
9. Better Homes and Gardens, Rate Card No. 66, published by Meredith Corporation, Des Moines, Iowa.
10. Marilyn Gardner, Ruth Wilson, David Skoloda, 'Wild Rice', Wisconsin Insight, the Sunday Magazine of the Milwaukee Journal, Nov. 23, 1969, pp. 36-40. Mr. Skoloda has written several other articles in the Journal about rice paddies and harvesting methods.
11. "Sexy Appeal Aim to Sell More Rice, Baby", Advertising Age, XL, (September 29, 1969), 52.
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13. Ibid., p. 47, p. 51.
14. Ibid., pp. 52-57. The average price for 1968 was used in Figure C.
15. Erdman, Wild Rice in Minnesota, p. 110.
16. Little, Wild Rice in Manitoba, p. 76.
17. Ibid., p. 83.

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